**Homework 5.2d\_5.3a: Dilations**

***Dilations***

**Find the coordinates of the vertices of each figure after a dilation with the given scale factor *k*. Then graph the original image and the dilation.**

 **1.** *J*(–4, –1), *K*(0, 4), *L*(–4, –2); $k=\frac{1}{2}$ **2.** *R*(–2, 1), *A*(1, 1), *I*(0, –1), *N*(–1, –1); *k* = 2





 **3.** *P*(–3, 3), *Q*(6, 3), *R*(6, –3), *S*(–3, –3); $k=\frac{1}{3}$ **4.** *A*(1, –2), *B*(2, 1), *C*(3, 0); *k* = 3





 **5. PHOTOS** Kiesha used a photo that measured 4 inches by 6 inches to make a copy that measured 8 inches by 12 inches. What is the scale factor of the dilation?

 **6. MODELS** David built a model of a regulation basketball court. His model measured approximately 3.75 feet long by 2 feet wide. The dimensions of a regulation court are 94 feet long by 50 feet wide. What is the scale factor David used to build his model?

 **7. BLUEPRINTS** On the blueprints of Mr. Wong’s house, his great room measures 4.5 inches by 5 inches. The actual great room measures 18 feet by 20 feet. What is the scale factor of the dilation?

**Transformational Geometry Task**

**Use the diagram and information below to answer questions a, b, c and d for question #1**

Below are two diagrams. One represents a reflection and one represents a rotation. 

 1. a.) Which graph represents the reflection? ***Answer***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b.) On the lines below explain how you know the graph you chose represents a reflection? Use proper math vocabulary in your explanation.

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c.) Which graph represents the rotation? ***Answer***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d.) On the lines below explain how you know the graph you chose represents a rotation? Use proper math vocabulary in your explanation and state the rotation degree.

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